

Notice of Allowability

Application No.

10/672,785

Examiner

Ling-Siu Choi

Applicant(s)

HAWLEY ET AL.

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 01/09/2006.
2. ☒ The allowed claim(s) is/are 11-45 and 49-59.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

1. This Office Action is in response to the Amendment and Response filed January 9, 2006. Claims 1-10 and 46-48 were canceled and claims 11-45 and 49-59 are now pending. In view of the Amendment and Response, the double patenting is withdrawn.

Examiner's Amendment

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CAR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Jeffery B. Arnold on March 30, 2006.

3. The application has been amended as follows:

Claim 43, line 3, "at least one treated solid oxide compound" is changed to --at least one catalyst precursor--;

Claim 43, line 30, "from 1 to 3 inclusive; and" is suggested to be changed to --from 1 to 3 inclusive; wherein the catalyst precursor comprises a contact product of at least one treated solid oxide compound and at least one alpha olefin; and--

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Allowable Subject Matter

2. Claims 11-45 and 49-59 are allowed.

3. The following is an examiner's statement of reasons for allowance:

The present claims are allowable over the closest references: McDaniel et al.

(US 6,107,230).

A catalyst composition comprising a contact product of		
1	a catalyst precursor	at least one treated solid oxide compound
		at least one alpha olefin
	wherein the at least one treated solid oxide compound comprises a contact product of (a) at least one solid oxide compound, (b) at least one electron-withdrawing anion source compound, and optionally, (c) at least one metal salt compound	
2	at least one organometal compound	$M^1(X^1)(X^2)(X^3)(X^4)$
	wherein X^1 and X^2 = cyclopentadienyl, indenyl, fluorenyl, substituted cyclopentadienyl, substituted indenyl, substituted fluorenyl	
3	at least one organoaluminum compound	$Al(X^5)_n(X^6)_{3-n}$

(summary of claim 15)

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A catalyst composition comprising a contact product of	
1	a catalyst precursor: a chlorided, zinc-containing alumina and propylene
2	at least one organometal compound: rac-dimethylsilybis(1-indenyl) zirconium dichloride, rac-1,2-ethanediylbis(1-indenyl)zirconium dichloride, or rac-dimethylsilybis(2-methyl-1-indenyl)zirconium dichloride
3	at least one organoaluminum compound: triethylaluminum or triisobutylaluminum

(summary of claim 16)

McDaniel et al. disclose a catalyst composition obtained by the contact of at least one organometal compound, at least one treated solid oxide compound, and at least one organoaluminum compound, wherein the at least one organometal compound is $M^1(X^1)(X^2)(X^3)(X^4)$ with X^1 being cyclopentadienyl, indenyl, fluorenyl, substituted cyclopentadienyl, substituted indenyl, substituted fluorenyl; the at least one organoaluminum compound is $Al(X^5)_n(X^6)_{3-n}$; the at least one treated solid oxide compound comprises a contact product of at least one solid oxide compound, at least one electron-withdrawing anion source compound, and optionally, at least one metal salt compound (claim 1). However, McDaniel do not teach or fairly suggest a **catalyst** composition comprising at least **one alpha olefin**.

In light of the above discussion, it is evident as to why the present claims are patentable over the prior art.

Any comments considered necessary by applicant must be submitted no later

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than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-1098.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reach on 571-272-1114.


LING-SUI CHOI
PRIMARY EXAMINER

March 25, 2006